

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 02/03834

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 F01D17/16 F01D17/14

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F01D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 314 736 B1 (FLEDERSBACHER PETER ET AL) 13 November 2001 (2001-11-13)	1-3,7,9
Y	column 2, line 16-18 column 3, line 8 - line 16 figures 1,2	4-6,8
Y	US 5 214 920 A (LEAVESLEY MALCOLM G) 1 June 1993 (1993-06-01) column 2, line 21 - line 30 column 6, line 37 - line 40 column 7, line 39 - line 43 figures 6,7,10	4-6,8
A	WO 02 44527 A (ESPASA OLIVIER ;HONEYWELL GARRETT SA (FR); LOMBARD ALAIN RENE (FR)) 6 June 2002 (2002-06-06) figures	1-9
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

\*G\* document member of the same patent family

Date of the actual completion of the international search

26 May 2003

Date of mailing of the international search report

03/06/2003

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01 53679 A (VIOLA ERIC JOSEPH ;ALLIEDSIGNAL TURBO S A (FR); BERNARDINI LUCIANO) 26 July 2001 (2001-07-26) figure 1	1-9
X	US 2 976 013 A (ULRICH HUNTER DAVID) 21 March 1961 (1961-03-21) figure 1	1
A	US 4 557 665 A (SZCZUPAK DAVID T) 10 December 1985 (1985-12-10) column 4, line 33 - line 47 figure 2	1-9
A	EP 0 034 915 A (HOLSET ENGINEERING CO) 2 September 1981 (1981-09-02) page 2, line 14 - line 20 figure 2	1-9
A	EP 1 128 025 A (MAN NUTZFAHRZEUGE AG) 29 August 2001 (2001-08-29) figure 1	1-3
X	GB 138 592 A (BBC BROWN BOVERI & CIE) 6 May 1920 (1920-05-06) figures 1,2	10
X	US 4 890 977 A (TREMAINE ERIC ET AL) 2 January 1990 (1990-01-02) figure 1	10

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

**1. Claims: 1-9**

Variable nozzle device for a turbocharger and method for operating a variable nozzle device

**2. Claim : 10**

Vane pivoting mechanism

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International application No.  
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## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 02/03834

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6314736	B1	13-11-2001	DE 19961613 A1 EP 1111196 A2	19-07-2001 27-06-2001
US 5214920	A	01-06-1993	US 5231831 A	03-08-1993
WO 0244527	A	06-06-2002	WO 0244527 A1 AU 2181201 A	06-06-2002 11-06-2002
WO 0153679	A	26-07-2001	WO 0153679 A1 AU 3053800 A CA 2397445 A1 EP 1247012 A1	26-07-2001 31-07-2001 26-07-2001 09-10-2002
US 2976013	A	21-03-1961	NONE	
US 4557665	A	10-12-1985	DE 3377587 D1 EP 0095853 A1	08-09-1988 07-12-1983
EP 0034915	A	02-09-1981	BR 8101054 A EP 0034915 A1 ES 8205932 A1 JP 56129705 A PL 229827 A1	25-08-1981 02-09-1981 01-11-1982 12-10-1981 18-09-1981
EP 1128025	A	29-08-2001	DE 10009099 A1 EP 1128025 A2	30-08-2001 29-08-2001
GB 138592	A	06-05-1920	NONE	
US 4890977	A	02-01-1990	NONE	